- I) ANSI T1.403-1989, Carrier to Subscriber Installation, DS1 Metallic Interface Specification.
- m) ANSI T1.404-1994, Network-to-Subscriber Installation DS3 Metallic Interface Specification.
- n) ITU-T Recommendation G.707, Network node interface for the synchronous digital hierarchy (SDH).
- o) ITU-T Recommendation G.704, Synchronous frame structures used at 1544, 6312, 2048, 8488 and 44736 kbit/s hierarchical levels.
- p) Bellcore FR-440 and TR-NWT-000499, Transport Systems Generic Requirements (TSGR): Common Requirements.
- q) Bellcore GR-820-CORE, Generic Transmission Surveillance: DS1 & DS3 Performance.
- r) Bellcore GR-253-CORE, SONET Common Generic Criteria.
- s) Bellcore TR-NWT-000776, Network Interface Description for ISDN Subscriber Access.

18.11 Unbundled Signaling Link Transport & STP Requirements

- a) ANSI T1.111-1992 Signaling System Number 7 (SS7) Message Transfer Part (MTP).
- b) ANSI T1.111A-1994 Signaling System Number 7 (SS7) Message Transfer Part (MTP) Supplement.
- c) ANSI T1.112-1992 Signaling System Number 7 (SS7) Signaling Connection Control Part (SCCP).
- d) ANSI T1.115-1990 Signaling System Number 7 (SS7) Monitoring and Measurements for Networks.
- e) ANSI T1.116-1990 Signaling System Number 7 (SS7) Operations, Maintenance and Administration Part (OMAP).
- f) ANSI T1.118-1992 Signaling System Number 7 (SS7) Intermediate Signaling Network Identification (ISNI).

- g) Bellcore GR-905-CORE, Common Channel Signaling Network Interface Specification (CCSNIS) Supporting Network Interconnection, Message Transfer Part (MTP), and Integrated Services Digital Network User Part (ISDNUP).
- h) Bellcore GR-1432-CORE, CCS Network Interface Specification CCSNIS) Supporting Signaling Connection Control Part (SCCP) and Transaction Capabilities Application Part (TCAP).

18.12 SCP/Database Access Requirements

- a) Bellcore GR-246-CORE, Bell Communications Research Specification of Signaling System Number 7.
- b) Bellcore GR-1432-CORE, CCS Network Interface Specification (CCSNIS) Supporting Signaling Connection Control Part (SCCP) and Transaction Capabilities Application Part (TCAP).
- c) Bellcore GR-954-CORE, CCS Network Interface Specification (CCSNIS) Supporting Line Information Database (LIDB) Service.
- d) Bellcore GR-1149-CORE, OSSGR Section 10: System Interfaces, Issue 1 (Bellcore, October 1995) (Replaces TR-NWT-001149).
- e) Bellcore GR-1158-CORE, OSSGR Section 22.3: Line Information Database.
- f) Bellcore GR-1428-CORE, CCS Network Interface Specification (CCSNIS) Supporting Toll Free Service.
- g) Bellcore Special Report SR-TSV-002275, "IBOC Notes on the LEC Networks Signaling."

18.13 Unbundled Tandem Switching

- a) Bell Communications Research TR-TSY-000540 Issue 2R2, Tandem Supplement.
- b) Bellcore GR-905-CORE covering CCSNIS.
- c) Bellcore GR-1429-CORE for call management features; and GR-2863-CORE and GR-2902-CORE covering CCS AIN interconnection.
- d) Bellcore FR-NWT-000064 -- Generic Requirements LATA Switching Systems.

18.14 Unbundled Network Elements - Additional Performance Requirements and Standards References

- a) Bellcore FR-NWT-000064, LATA Switching Systems Generic Requirements (LSSGR) and associated Technical references.
- b) Bellcore TR-NWT-000499 -- Transport Systems Generic Requirements (TSGR): Common Requirements.
- c) Bellcore TR-NWT-000418, Generic Reliability Assurance Requirements For Fiber Optic Transport Systems.
- d) Bellcore TR-NWT-000057, Functional Criteria for Digital Loop Carriers Systems.
- e) Bellcore TR-NWT-000507, LSSGR Transmission, Section 7.
- f) Bellcore GR-303-CORE, Integrated Digital Loop Carrier System Generic Requirements, Objectives, and Interface.
- g) Bellcore GR-334-CORE, Switched Access Service: Transmission Parameter Limits and Interface Combinations.
- h) Bellcore TR-NWT-000335, Voice Grade Special Access Services Transmission Parameter Limits and Interface Combinations.
- i) Bellcore TR-TSY-000529, Public Safety LSSGR.
- j) Bellcore GR-1158-CORE, OSSGR Section 22.3: Line Information Database.
- k) Bellcore TR-TSY-000511, Service Standards, a Module (Section 11) of LATA Switching Systems Generic Requirements (LSSGR, FR-NWT-000064).
- I) Bellcore TR-NWT-000393, Generic Requirements for ISDN Basic Access Digital Subscriber Lines.
- m) Bellcore TR-NWT-000909, Generic Requirements and Objectives for Fiber In The Loop Systems.
- n) Bellcore TR-NWT-000505, LSSGR Section 5, Call Processing.
- o) Bellcore FR-NWT-000271, Operator Services Systems Generic Requirements (OSSGR).
- p) Bellcore TR-NWT-001156, OSSGR Operator Services Systems Generic Requirements, Section 21, Operator Subsystem.

- q) Bellcore SR-TSY-001 171, Methods and Procedures for System Reliability Analysis.
- r) Bellcore Telecommunications Transmission Engineering, 3rd Ed, 1990.
- s) ANSI T1.512-1994, Network Performance Point-to-Point Voice-Grade Special Access Network Voiceband Data Transmission Objectives.
- t) ANSI T1.506-1990, Network Performance Transmission Specifications for Switched Exchange Access Network.
- u) ANSI T1.508-1992, Telecommunications Network Performance Loss Plan for Evolving Digital Networks. Also supplement T1.508a-1993.
- v) ANSI T1.101-1994, Digital Synchronization Network Plan.
- w) TIA/EIA TSB-37A, Telephone Network Transmission Model for Evaluating Modem Performance.
- x) TIA/EIA TSB-38, Test Procedure for Evaluation of 2-wire 4 kHz Voiceband Duplex Modems.
- y) IEEE Standard 743-1984, IEEE Standard Methods and Equipment for Measuring Transmission Characteristics of Analog Voice Frequency Circuits.
- z) ANSI/IEEE Standard 820-1984, Telephone Loop Performance Characteristics.

18.15 SS7 Interfaces

- a) ANSI T1.110-1992, Signaling System Number 7 (SS7) General Information.
- b) ANSI T1.111-1992 Signaling System Number 7 (SS7) Message Transfer Part (MTP).
- c) ANSI T1.111A-1994 Signaling System Number 7 (SS7) Message Transfer Part (MTP) Supplement.
- d) ANSI T1.112-1992 Signaling System Number 7 (SS7) Signaling Connection Control Part (SCCP).
- e) ANSI T1.113-1995 Signaling System Number 7 (SS7) Integrated Services Digital Network (ISDN) User Part.

- f) ANSI T1.114-1992 Signaling System Number 7 (SS7) Transaction Capabilities Application Part (TCAP).
- g) ANSI T1.115-1990 Signaling System Number 7 (SS7) Monitoring and Measurements for Networks.
- h) ANSI T1.116-1990 Signaling System Number 7 (SS7) Operations, Maintenance and Administration Part (OMAP).
- i) ANSI T1.118-1992 Signaling System Number 7 (SS7) Intermediate Signaling Network Identification (ISNI).
- j) Bellcore GR-905-CORE, Common Channel Signaling Network Interface Specification (CCSNIS) Supporting Network Interconnection, Message Transfer Part (MTP), and Integrated Services Digital Network User Part (ISDNUP).
- k) Bellcore GR-954-CORE, CCS Network Interface Specification (CCSNIS) Supporting Line Information Database (LIDB) Service.
- I) Bellcore GR-1428-CORE, CCS Network Interface Specification (CCSNIS) Supporting Toll Free Service.
- m) Bellcore GR-1429-CORE, CCS Network Interface Specification (CCSNIS) Supporting Call Management Services.
- n) Bellcore GR-1432-CORE, CCS Network Interface Specification (CCSNIS) Supporting Signaling Connection Control Part (SCCP) and Transaction Capabilities Application Part (TCAP).

ANNEX 1

Schedule for Implementation

Implementation Activity

Deadline

Timetable for Elements Required by FCC

Effective Date of the Agreement

Local Loop Loop Distribution Loop Feeder Loop Concentrator/Multiplexer NID **Local Switching Tandem Switching** Interoffice Transmission Facilities (Common) Signaling Network & Call-Related Database **Operations Support System Functions** Operating Services & Directory Assistance Unbundling Requested by MCI Subloop Unbundling Multiplexing / Digital Cross Connects Service Management Systems Extended Link Service Database Access

To Be Determined Pursuant to BFR To Be Determined Pursuant to BFR To Be Determined Pursuant to BFR

^{*} Unless Parties agree to a different date.



Attachment IV INTERCONNECTION

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ATTACHMENT IV

INTERCONNECTION

Section 1 Local Interconnection Trunk Arrangement

- 1.1 The Parties shall reciprocally terminate local exchange traffic and intraLATA toll calls originating on each other's networks as follows:
 - 1.1.1 The Parties shall make available to each other two-way trunks for the reciprocal exchange of combined local traffic, non-equal access intraLATA toll traffic, and local transit traffic to other LECs. Traffic may be routed in a one-way manner on these two way trunks by mutual agreement.
 - 1.1.2 The Parties shall make available to each other separate two-way trunks for the exchange of equal-access interLATA or intraLATA interexchange traffic that transits NYNEX's network.
 - 1.1.3 MCIm shall use or order from NYNEX, and NYNEX shall make available, separate trunks connecting MCIm's switch to each 911/E911 tandem.
 - 1.1.4 MClm shall use or order from NYNEX, and NYNEX shall make available, separate trunk groups connecting MClm's switch to NYNEX's operator service center. MClm, at its option, may establish trunks from its own operator services platform directly to NYNEX's operator service center.
 - 1.1.5 MCIm shall use or order from NYNEX, and NYNEX shall make available, separate trunk groups connecting MCIm's switch to NYNEX's directory assistance center in instances where MCIm purchases NYNEX's unbundled directory assistance service.
 - 1.1.6 The Parties recognize that there is no technical requirement to segregate local and interexchange traffic. Further, it shall be incumbent upon NYNEX to prove that a request for a revised traffic combination is technically infeasible.
 - 1.1.7 Separate trunk groups from MCIm's switch or switches to each of NYNEX's sector tandems will be provisioned to enable the completion of traffic to/from NYNEX's end offices subtending each sector tandem and MCIm's switch or switches. In all LATAs except for LATA 132, this will require trunk provisioning to the single NYNEX sector tandem. In LATA 132 where NYNEX

has deployed multiple sector tandems, trunk groups to each sector tandem will be logically provisioned with physical interconnection actually occurring at the designated interconnection point or points in the LATA as defined in Section 1.2 below.

1.2 IP

- 1.2.1 IP means the physical point that establishes the technical interface, which may include a test point, and the operational responsibility associated with the physical transmission facility hand-off between MCIm and NYNEX for the local interconnection of their networks.
- 1.2.2 MCIm and NYNEX shall designate at least one IP in the LATA in which MCIm originates local traffic and interconnects with NYNEX. MCIm will be responsible for engineering and maintaining its network on its side of the IP. NYNEX will be responsible for engineering and maintaining its network on its side of the IP. If and when the Parties choose to interconnect at a mid-span meet, MCIm and NYNEX will develop a mutually acceptable joint provisioning plan for the fiber optic or other suitable facilities that will then connect the two networks and each shall bear the financial and other responsibilities for its portion of that facility. In LATA 132, MCIm and NYNEX already have established interconnection arrangements. These interconnection points will be physically maintained in place until it is mutually agreed by the Parties to establish other IP arrangements. The exchange of traffic at these initial IPs will comply with the general terms and conditions, including those related to price, embodied in this Agreement between the Parties.
 - 1.2.2.1 Upon MCIm's request for additional points of interconnection, NYNEX will interconnect with MCIm at any technically feasible point. Such interconnection shall be implemented using the same technical configuration currently deployed by the Parties for existing interconnections or by using other mutually agreeable arrangements including but not limited to mid-span fiber meets, entrance facilities, telco closets, and collocation. The Parties will not withhold agreement except for reasons of technical infeasibility and the refusing Party will be required to prove that a requested IP is not technically feasible if it should so ascertain.
 - 1.2.2.2 Within three (3) business days of becoming aware of an environmental or hazardous condition that would impact upon the establishment of a requested MCIm interconnection point, NYNEX will notify MCIm of the condition. NYNEX and MCIm will work cooperatively to implement a joint planning process that will facilitate establishment and maintenance of current and future IPs, interconnection transmission facilities and trunking arrangements between the Parties' respective

networks. Upon an MCIm request to NYNEX for establishment of a new interconnection point on the NYNEX network, NYNEX will make a good faith effort to provide an environmentally sound and hazard free location on its network for the IP. If, upon assessment, it is determined that a hazardous condition exists, in addition to providing notification as described above, NYNEX will promptly propose an alternative IP comparable to the requested IP in question or promptly act to ameliorate such hazardous condition so as to enable the IP to be established in a safe and timely manner.

1.2.2.3 NYNEX will work cooperatively with MCIm to perform promptly any environmental site investigations, including, but not limited to, asbestos surveys, MCIm deems to be necessary in support of its collocation needs. MCIm will bear the reasonable cost for all such surveys it requests.

Section 2 Compensation Mechanisms

2.1 IP

2.1.1 Each Party is responsible for bringing its facilities to the IP and for all aspects of its network on its side of the IP.

2.2 Compensation for the Transport and Termination of Local Calls

- 2.2.2 The IP determines the point at which the originating carrier shall pay the terminating carrier for the termination of local calls. The following compensation elements shall apply:
 - 2.2.2.1 "Transport," which includes the transmission and any necessary tandem switching of local telecommunications traffic from the interconnection point between the two carriers to the terminating carrier's end-office switch that serves the called end-user.
 - 2.2.2.2 "Termination," which includes the switching of local telecommunications traffic at the terminating carrier's end office switch.
- 2.3 When an MCIm subscriber places a local call to a NYNEX subscriber, MCIm will hand off that call to NYNEX at the IP. Conversely, when NYNEX hands over local traffic to MCIm for MCIm to transport and terminate, NYNEX will hand off that call to MCIm at the established IP.
- 2.4 MCIm may request and NYNEX will jointly provide an IP at any technically feasible point including but not limited to any electronic or manual cross-connect points, collocation nodes, telco closets, entrance facilities, and mid-span meets. The transport

and termination charges for local traffic flowing through an IP shall be in accordance with either of the two alternatives that follow:

- 2.4.1 When calls from MCIm are terminated on NYNEX's network through the NYNEX tandem, MCIm will pay to NYNEX transport charges from the IP to the tandem for direct or common transport. MCIm shall also pay a charge for the actual elements used by MCIm, such as tandem switching, direct or common transport to the end office (with mileage calculated as the weighted average of all end offices subtending that tandem), and end-office termination.
- 2.4.2 When NYNEX terminates calls to MCIm's subscribers using MCIm's switch, NYNEX shall pay to MCIm the tandem interconnection charge set forth in Attachment I of this Agreement; provided, that MCIm offers to NYNEX more efficient interconnection options at alternative points on MCIm's network.
- 2.4.3 MCIm may choose to establish direct trunking to any given end office. If MCIm leases trunks from NYNEX, it shall pay charges for direct or common transport. For calls terminating from MCIm to subscribers served by these directly-trunked end offices, MCIm shall also pay an end-office termination. For NYNEX traffic terminating to MCIm over the direct end office trunking, compensation payable by NYNEX shall be the same as that detailed in Section 2.4.4 below.
- 2.4.4 NYNEX may choose to establish direct trunking to any given MClm end office. If NYNEX leases trunks from MClm, it shall pay charges for direct or common transport. For calls terminating from NYNEX to subscribers served by these directly-trunked end offices, NYNEX shall also pay an end-office termination. For MClm traffic terminating to NYNEX over the direct end office trunking, compensation payable by MCl shall be the same as that detailed in Section 2.4.3 above.

2.4.5 [INTENTIONALLY LEFT BLANK]

2.4.6 In the alternative to the reciprocal compensation arrangement described in Sections 2.4.1 through 2.4.4 above, NYNEX and MCIm may mutually agree to compensate each other for all local calls at a unitary, equal and symmetrical rate irrespective of the use of end office or tandem trunking and without regard for the mileage calculation that is associated with the direct and common transport actually utilized on a given call by call basis.

Section 3 Signaling

3.1 **Signaling Protocol.** The Parties will interconnect their networks using out-of-band signaling wherever possible (Common Channel Signaling System 7 ("CCS" or "SS7") provides out-of-band signaling for the trunking between switches in telecommunications

carriers' networks) as defined in GR-317 and GR-394, including ISUP for trunk signaling and TCAP for CCS-based features in the interconnection of their networks. The Parties shall adhere to all NOF adopted guidelines to the greatest extent possible.

- 3.2 The Parties will provide CCS to each other in conjunction with all one-way and two-way trunk groups supporting local, transit, and toll traffic. The Parties will cooperate on the exchange of TCAP messages to facilitate full inter-operability of CCS-based features between their respective networks, including all CLASS features and functions deployed in the Parties' respective networks. All CCS signaling parameters will be provided including ANI, OLI, calling party category, charge number, etc. All privacy indicators will be honored. In connection with meet-point billing arrangements using terminating Feature Group D protocol, NYNEX will pass CPN if it receives CPN from the interexchange carriers. All privacy indicators will be honored. Where available, network signaling information such as TNS parameter (CCS platform) and CIC/OZZ information (non-CCS environment) will be provided by MCIm wherever such information is needed for call routing or billing. The Parties will follow all OBF adopted guidelines pertaining to TNS and CIC/OZZ codes to the greatest extent possible.
- 3.3 The requirements for SS7 Network Interconnection are set forth in Section 15.5 of Attachment III.
- 3.4 Standard interconnection facilities shall be equipped to accommodate ESF with B8ZS line code. MCIm and NYNEX will work cooperatively to establish suitable routing arrangements sufficient to mark properly individual calls requiring end-to-end digital transport with ESF B8ZS capability, which capability is deployed as an overlay and not ubiquitously in NYNEX's network. Where ESF/B8ZS is not available, MCIm will agree to using other interconnection protocols on an interim basis until the standard ESF/B8ZS is available. NYNEX will provide anticipated dates of availability for those areas not currently ESF/B8ZS compatible.
 - 3.4.1 Where MCIm is unwilling to utilize an alternate interconnection protocol, MCIm, at its option, will provide NYNEX with an initial forecast of 64 Kbps Clear Channel Capability ("64K CCC") trunk quantities within thirty (30) days after executing this Agreement consistent with the forecasting agreements between the Parties or consistent with the requirements that the Parties may mutually agree upon as part of their ongoing joint planning efforts. Upon receipt of this forecast, or in a different time frame as may be mutually agreed by the Parties as part of their joint planning efforts, the Parties will begin planning for the engineering, procurement, and installation of the suitable 64K CCC Local Interconnection Trunks, and the associated B8ZS ESF facilities, for the purpose of supporting the completion of 64K CCC data calls between MCIm and NYNEX subscribers. Where additional equipment is required in the NYNEX network to support this capability, such equipment would be obtained, engineered, and installed in parity with the comparable installations for traditional growth jobs for

- IECs, CLECs, or NYNEX internal trunking requirements. Where technically feasible, these trunks will be established as two-way.
- 3.5 The Parties initially will interconnect to 911/E911 utilizing in-band MF signaling and will work cooperatively to migrate these arrangements to SS7 based signaling when appropriate to do so.
- 3.6 If MCIm elects to utilize SS7 signaling in connection with meet point billing arrangements utilizing a NYNEX access tandem for calls to/from interexchange carriers that utilize Feature Group B or D service with MF signaling, NYNEX shall have no liability for the end-to-end performance, including post dial delay performance, that MCIm's customers may receive.

Section 4 Network Servicing

4.1 Trunk Forecasting

- 4.1.1 The Parties shall work toward the development of joint forecasting responsibilities for traffic utilization over trunk groups as part of their ongoing joint planning activities. Orders for trunks that exceed forecasted quantities for forecasted locations will be accommodated as facilities and or equipment are available. The Parties shall make all reasonable efforts and cooperate in good faith to develop alternative solutions to accommodate orders when facilities are not available. Intercompany forecast information must be provided by the Parties to each other twice a year. The semi-annual forecasts shall include:
 - 4.1.1.1 Yearly forecasted trunk quantities (which include measurements that reflect actual tandem and end office Local Interconnection and meet point trunks and tandem-subtending Local Interconnection end office equivalent trunk requirements for no more than two years (current plus one year));
 - 4.1.1.2 The use of Common Language Location Identifier (CLLI-MSG), which are described in Bellcore documents BR 795-100-100 and BR 795-400-100; and
 - 4.1.1.3 Description of major network projects that affect the other Party. Major network projects include, but are not limited to, trunking or network rearrangements, shifts in anticipated traffic patterns, or other activities by either Party that are reflected by a significant increase or decrease in trunking demand for the following forecasting period.
- 4.1.2 The Parties shall meet to review their forecasts on a scheduled basis and work cooperatively to reconcile their forecasts if these forecasts vary significantly, either with each other or from period to period.

- 4.1.2.1 If the Parties are unable to reach such a reconciliation, the Local Interconnection Trunk Groups shall be provisioned to the quantities specified in the higher of the two (2) forecasts. The Parties will monitor the utilization of the Local Interconnection Trunk Groups and review the average CCS utilization for the next busy season if known or for the next three (3) months if the busy season has yet to be or cannot be determined. If volume during the next busy season or by the third month, if the busy season is not known, is under seventy-five percent (75%) of design engineering capacity, either Party may issue an order to resize the trunk group, which shall be left with not less than twenty-five percent (25%) excess capacity, except as otherwise mutually agreed by the Parties. Maintaining this level of excess capacity will provide an operating margin sufficient to meet the higher of the two expected load requirements. A general description of the trunk traffic engineering practices to be utilized by the Parties is described herein and may be amended by mutual agreement of the Parties as part of their ongoing joint planning activities.
- 4.1.2.2 If the Parties mutually agree on the original forecast and then it is determined that a trunk group is under seventy-five percent (75%) of design engineering capacity on a monthly-average basis for each month of any six-month period or the next busy season, either Party may issue an order to resize the trunk group, which shall be left with not less than twenty-five percent (25%) excess capacity.
- 4.1.3 In order to mutually engineer efficient network interconnection arrangements, each Party shall provide a specified point of contact for planning, forecasting and trunk servicing purposes. The Parties may mutually agree to additional details or changes to the details specified herein as a result of their ongoing planning activities.
- 4.1.4 Trunking can be established to tandems or end offices, or a combination of both, via either one-way or two-way trunks. Initial trunk termination will be at the DS-0 level and/or DS-1 level as appropriate. Higher level trunk termination (such as at the DS3 or OC3 levels) will be provided as such technology is deployed in the NYNEX network. The Parties will work cooperatively to determine the appropriate trunk termination level as part of their ongoing joint planning activities. Initial trunking will be established between the MCIm switching centers and NYNEX's sector tandem(s). MCIm and NYNEX will utilize direct end office trunking under the conditions set forth below, unless the Parties mutually agree to utilize different criteria as a result of their ongoing joint planning activities:
 - 4.1.4.1 Tandem exhaust If a tandem through which the Parties are interconnected is unable to, or is forecasted to be unable to, support

additional traffic loads for any period of time, the Parties will mutually agree on an end office trunking plan that will alleviate the tandem capacity shortage and ensure completion of traffic between MCIm and NYNEX subscribers. The Parties will rely on the trunk engineering principles embodied in this Agreement or as may be mutually agreed to as part of their ongoing planning activities to address a tandem exhaust situation should such a condition arise.

- 4.1.4.2 Traffic volume The Parties shall install and maintain direct end office trunking sufficient to handle actual or reasonably forecast traffic volumes, whichever is greater, between an MCIm switching center and a NYNEX end office where the offered traffic load exceeds or is forecast to exceed 220,000 minutes of local traffic use per month. The Parties will install additional capacity between such points when overflow traffic between the MCIm switching center and NYNEX access tandem exceeds or is forecast to exceed an offered load of 220,000 minutes of use per month.
- 4.1.4.3 Mutual agreement The Parties may install direct end office trunking upon mutual agreement in the absence of the conditions set forth in Sections 4.1.4.1 and 4.1.4.2 above and agreement will not unreasonably be withheld. The specific trunk traffic engineering design criteria to be applied cooperatively by MCIm and NYNEX are described herein and may be amended by mutual agreement of the Parties as part of their ongoing joint planning activities.

4.2 Grade of Service

4.2.1 It is the intent of the Parties to manage their respective networks to meet a trunk traffic engineering design framework that embodies the principles of modular sizing of trunk groups, a minimum size for direct trunk groups (other than special requirements such as 911/E911) of a full DS1. Network Cluster Busy Hour/Busy Season Erlang B and B.01 traffic engineering design parameters which will accommodate day-to-day variation and peakedness of overflow load characteristics. This will allow adoption of a blocking standard of one percent (.01) during the average busy hour, as defined by the Parties, for final trunk groups between an MCIm end office and a NYNEX local tandem or a NYNEX access tandem carrying meet-point traffic to be maintained. All other final trunk groups are to be engineered with a blocking standard of one percent (.01). Direct end office trunk groups are to be engineered as high usage trunks with an overflow to a tandem route with the final group designed to a blocking standard of one percent (.01), or if sufficient point to point load warrants. engineered as direct final trunk groups also designed to a one percent (.01) blocking standard. The Parties may mutually agree to changes in the trunk

traffic engineering criteria that are described herein as part of their ongoing joint planning activities.

4.3 Trunk Servicing

- 4.3.1 Orders between the Parties to establish, add, change or disconnect trunks shall be processed by use of an ASR, or the industry standard adopted to replace the ASR for local service ordering.
- 4.3.2 As discussed in this Agreement, both Parties will jointly manage the capacity of Local Interconnection Trunk Groups. NYNEX's Trunk Servicing Group will send a TGSR to MCIm to trigger changes NYNEX desires to the Local Interconnection Trunk Groups based on NYNEX's capacity assessment. The Parties may, upon mutual agreement as a result of their ongoing joint planning activities, elect to have one of the two Parties serve in an "in charge" capacity for trunk servicing and forecasting matters involving two-way trunking arrangements. MCIm will issue an AS to NYNEX: (i) within ten (10) business days after receipt of the TGSR upon review of and in response to NYNEX's TGSR; or (ii) at any time as a result of MCIm's own capacity management assessment, to begin the provisioning process.
- 4.3.3 The standard interval used for the provisioning of Local Interconnection Trunk Groups shall be determined in accordance with the intervals specified in the applicable tariff. These intervals will be implemented in parity with the intervals provided to other carriers in connection with comparable trunking augments and new group installations.
- 4.3.4 Orders that comprise a major project that directly impacts the other Party may be submitted at the same time, and their implementation shall be jointly planned and coordinated. Major projects are those that require the coordination and execution of multiple orders or related activities between and among NYNEX and MCIm work groups, including, but not limited to, the initial establishment of Local Interconnection or Meet Point trunk groups and service in an area, NXX code moves (understood to be a transfer of an entire NXX code from one switching unit to another switching unit, either on one of the Party's network or between the two Parties' networks), re-homes, facility grooming, or network rearrangements.
- 4.3.5 MCIm and NYNEX agree to exchange escalation lists which reflect contact personnel including vice president-level officers. These lists shall include name, department, title, phone number, and fax number for each person. MCIm and NYNEX agree to exchange an up-to-date list on a quarterly basis.
- 4.4 Joint Planning Activities: MCIm and NYNEX shall work cooperatively to implement the interconnection related processes that are described throughout this Attachment IV.

The Parties will continue to cooperate in connection with various joint planning activities and may by mutual agreement change existing or establish new processes.

- 4.4.1 The Parties will mutually agree on the physical interconnection architecture that will be utilized between the Parties' respective networks, consistent with Sections 1 and 4 of this Attachment IV. The Parties will work cooperatively to provide each other with sufficient advance notification of planned or contemplated changes that may affect the existing interconnection architecture arrangements as well as plans for the deployment of new interconnection architecture arrangements.
- 4.4.2 The Parties will cooperate on joint trunk traffic engineering planning to assure that, on an ongoing basis, the interconnection trunk groups between MCIm's network and NYNEX's network shall experience a grade of service, availability and quality which is comparable to that achieved on interoffice trunk groups within NYNEX's network and in accord with all relevant industry norms for quality, reliability and availability.
- 4.4.3 The Parties will cooperate on assessing the effectiveness of the agreed upon delineation of their respective duties and responsibilities for the ongoing administration and maintenance of the interconnection facilities and trunk groups, including, but not limited to, the practices and procedures to be followed related to the timely notification of desired facility and trunk additions, rearrangements and disconnects. The Parties may mutually agree to implement changes to existing interconnection processes that are defined herein and may establish new processes as a result of their joint activities related to interconnection.
- 4.4.4 The Parties may mutually agree to changes to and modifications in the procedures and provisions to be followed in connection with disaster recovery operations, including provisions that will accommodate intercompany escalation as may be needed.
- 4.4.5 By mutual agreement, the Parties may establish other such interconnection related processes that were not anticipated in advance of the execution of this Agreement.
- 4.4.6 Both Parties will make good faith efforts to assure that existing interconnection facilities and trunking arrangements and other interconnection facilities and trunking arrangements that are, and will be deployed, as a result of this Agreement will be provisioned, operated and maintained consistent with the terms embodied herein. The Parties will establish a schedule for ongoing planning meetings at which they can discuss changes to and additions to the interconnection related processes that will be put in place as a result of this Agreement.

Section 5 Network Management

5.1 Protective Protocols

5.1.1 Either Party may use protective network traffic management controls such as 7-digit and 10-digit code gaps on traffic toward each others network, when required to protect the public switched network from congestion due to facility failures, switch congestion or failure or focused overload. MCIm and NYNEX will notify each other as soon as possible of any protective control action planned or executed.

5.2 Expansive Protocols

5.2.1 Where the capability exists, originating or terminating traffic reroutes may be implemented by either Party to temporarily relieve network congestion due to facility failures or abnormal calling patterns. The Parties will work cooperatively in implementing emergency processes that will support the interconnection arrangements between their respective networks. The Parties will identify in advance of abnormal conditions pre-approved reroutes that can be implemented without securing approval from the other Party. Absent pre-approval, the Party requesting the reroute will secure approval from the terminating Party in accordance with normal network management practices. Such approval will not be withheld except for good and valid network management reasons. (For instance, a reroute will be authorized if the receiving party has some available capacity to accommodate increased call volumes while a reroute would be denied if the receiving party was unable to complete any of the additional calls that it received via the reroute.) Reroutes will not be used to circumvent normal trunk servicing. Expansive controls will only be used when mutually agreed to by the Parties.

5.3 Mass Calling

5.3.1 MCIm and NYNEX shall cooperate and share pre-planning information, where available, regarding cross-network call-ins expected to generate large or focused temporary increases in call volumes, to prevent or mitigate the impact of these events on the public switched network.

Section 6 Busy Line Verify and Interrupt

6.1 Description: Each Party shall establish procedures whereby its operator bureau will coordinate with the operator bureau of the other Party in order to provide BLV and BLVI services on calls between their respective end users on or before the Effective Date of this Agreement.

6.2 Compensation: Each Party shall charge the other Party for BLV and BLVI at the rates specified in the applicable tariff.

Section 7 Usage Measurement

- 7.1 Each Party shall calculate terminating interconnection minutes of use based on standard AMA recordings made within each Party's network, these recordings being necessary for each Party to generate bills to the other Party.
- 7.2 Measurement of minutes of use over Local Interconnection Trunk groups shall be in actual conversation seconds. The total conversation seconds over each individual Local Interconnection Trunk Group will be totaled for the entire monthly bill-round and then rounded to the next whole minute.
- 7.3 Each Party shall provide to the other, within twenty (20) calendar days unless another interval is mutually agreed by the Parties as a result of their ongoing planning activities, after the end of each quarter (commencing with the first full quarter after the Effective Date of this Agreement), or on a semi-annual basis if mutually agreeable to the Parties, a usage report with the following information regarding traffic terminated over the Local Interconnection Trunk Groups:
 - 7.3.1 Total traffic volume described in terms of minutes and messages and by call type (local, toll, and other) terminated to each other over the Local Interconnection Trunk Groups.

7.3.2 [INTENTIONALLY LEFT BLANK]

Section 8 Responsibilities of the Parties

- 8.1 NYNEX and MCIm agree to treat each other fairly, nondiscriminatorily, and equally for all items included in this Agreement, or related to the support of items included in this Agreement.
- 8.2 MCIm and NYNEX agree to exchange such reports and/or data as provided in Section 7 of this Attachment IV, to facilitate the proper billing of traffic. Either Party may request an audit of such usage reports on no fewer than ten (10) business days' written notice and any audit shall be accomplished during normal business hours at the office of the Party being audited. Such audit must be performed by a mutually agreed-to independent auditor paid for by the Party requesting the audit and may include review of the data described in Section 7 above. Such audits shall be requested within six (6) months of having received the PLU factor and usage reports from the other Party.
- 8.3 MCIm and NYNEX will review engineering requirements on a semi-annual basis and establish forecasts for trunk and facilities utilization provided under this Agreement. NYNEX and MCIm will work together to begin providing these forecasts within thirty

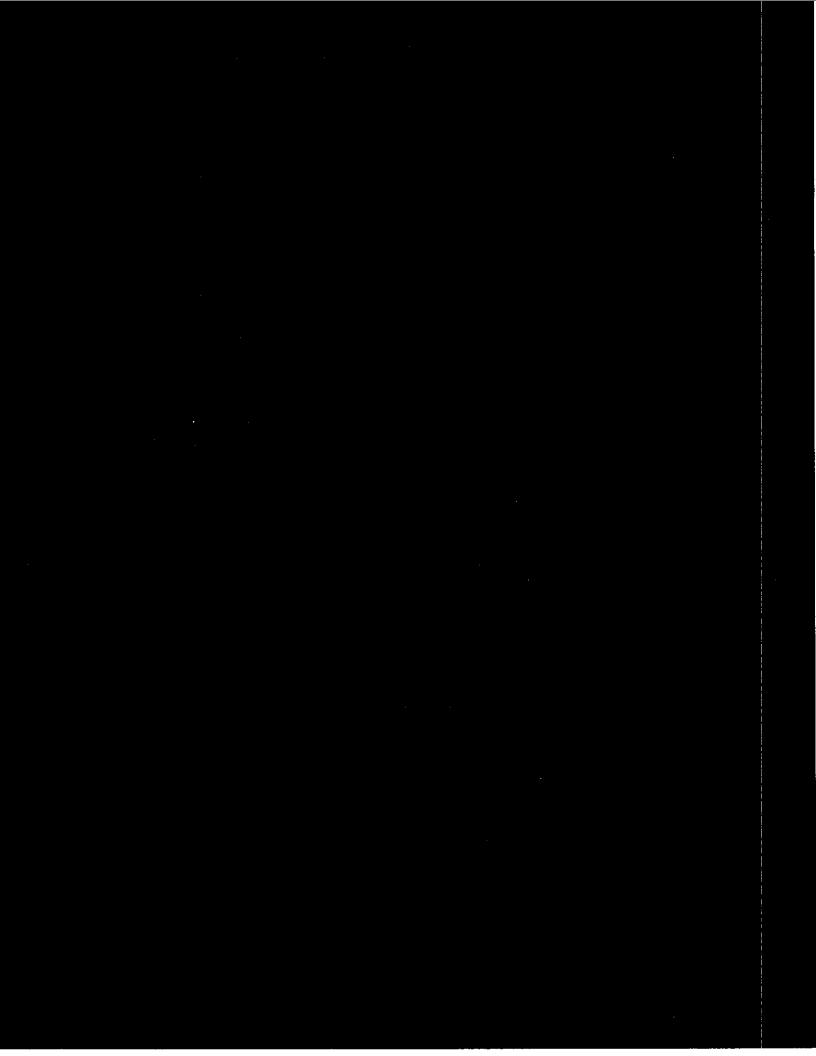
- (30) days from the Effective Date of this Agreement. New trunk groups will be implemented as dictated by engineering requirements for either NYNEX or MCIm. The Parties may mutually agree to modify these procedures as part of their ongoing joint planning activities.
- 8.4 MCIm and NYNEX shall share responsibility for all Control Office functions for Local Interconnection Trunks and Trunk Groups, and both Parties shall share the overall coordination, installation, and maintenance responsibilities for these trunks and trunk groups. In the case of two-way trunks, the Parties may by mutual agreement assign primary control office responsibility to one of the Parties.
- 8.5 MCIm and NYNEX will cooperate to establish responsibility for all Control Office functions for the meet point trunking arrangement trunks and trunk groups and will do so in parity with the industry standard arrangements that are defined in the MECABS/MECOD guidelines. The Party designated as control office shall be responsible for the overall coordination, installation, and maintenance responsibilities for these trunks and trunk groups.

8.6 MCIm and NYNEX shall:

- 8.6.1 Provide trained personnel with adequate and compatible test equipment to work with each other's technicians.
- 8.6.2 Notify each other when there is any change affecting the service requested, including the due date.
- 8.6.3 Coordinate and schedule testing activities of their own personnel, and others as applicable, to ensure its interconnection trunks/trunk groups are installed per the interconnection order, meet agreed-upon acceptance test requirements, and are placed in service by the due date.
- 8.6.4 Perform sectionalization to determine if a trouble is located in its facility or its portion of the interconnection trunks prior to referring the trouble to each other.
- 8.6.5 Advise each other's Control Office if there is an equipment failure which may affect the interconnection trunks.
- 8.6.6 Provide each other with an automated interface for trouble reporting/repair that is readily accessible and available 24 hours a day/7 days a week. An escalation contact will be available on a 24 hours a day/7 days a week basis to accommodate trouble reporting in the event the automated interface is not available. Any change to this escalation contact arrangement must be provided to the other Party in advance of implementation except for unavoidable

emergency conditions for which notification will be made as soon as possible thereafter.

- 8.6.7 Provide to each other test-line numbers and access to test lines.
- 8.6.8 Cooperatively plan and implement coordinated repair procedures for the meet point and Local Interconnection Trunks and facilities to ensure trouble reports are resolved in a timely and appropriate manner.



ATTACHMENT V COLLOCATION

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ATTACHMENT V

COLLOCATION

Section 1 Introduction

This Attachment V sets forth the terms and conditions under which MCIm may obtain Collocation from NYNEX.

Section 2 Definitions

As used in this Agreement, the following terms shall have the meanings specified below.

- 2.1 "Application Fee" means the amount specified in Attachment I to be paid by MCIm to NYNEX in connection with the submission of a Short Form Collocation Agreement, which amount shall cover, among other things, the cost of the Pre-Construction Survey.
- 2.2 "Cable Space" means any passage or opening in, on, under/over or through the Central Office cable support structure (e.g., cable risers, cable racks, cable vault or alternate splicing chamber) required to bring fire retardant fiber optic riser cable from the Partitioned Space to the location where the riser cable and the feeder cable meet and are spliced and the spaces between the splice and the Conduit Space, as well as the space between the Partitioned Space and the NYNEX Point of Termination and any other space required to bring other fire retardant communications cable from one Partitioned Space of MCIm to another Partitioned Space of MCIm.
- 2.3 "Collocation" means the right of MCIm to obtain dedicated Partitioned Space, Cable Space, Conduit Space, power and other associated resources related thereto in a Collocation Premises and to place equipment in such space to interconnect with the NYNEX network, services and/or unbundled Network Elements, and/or interconnect with any other Telecommunications Carrier located in such Collocation Premises through the use of NYNEX facilities.

MCIm-NYNEX NEW YORK INTERCONNECTION AGREEMENT (LAST REVISED 12/17/98: Amendment Number 2)